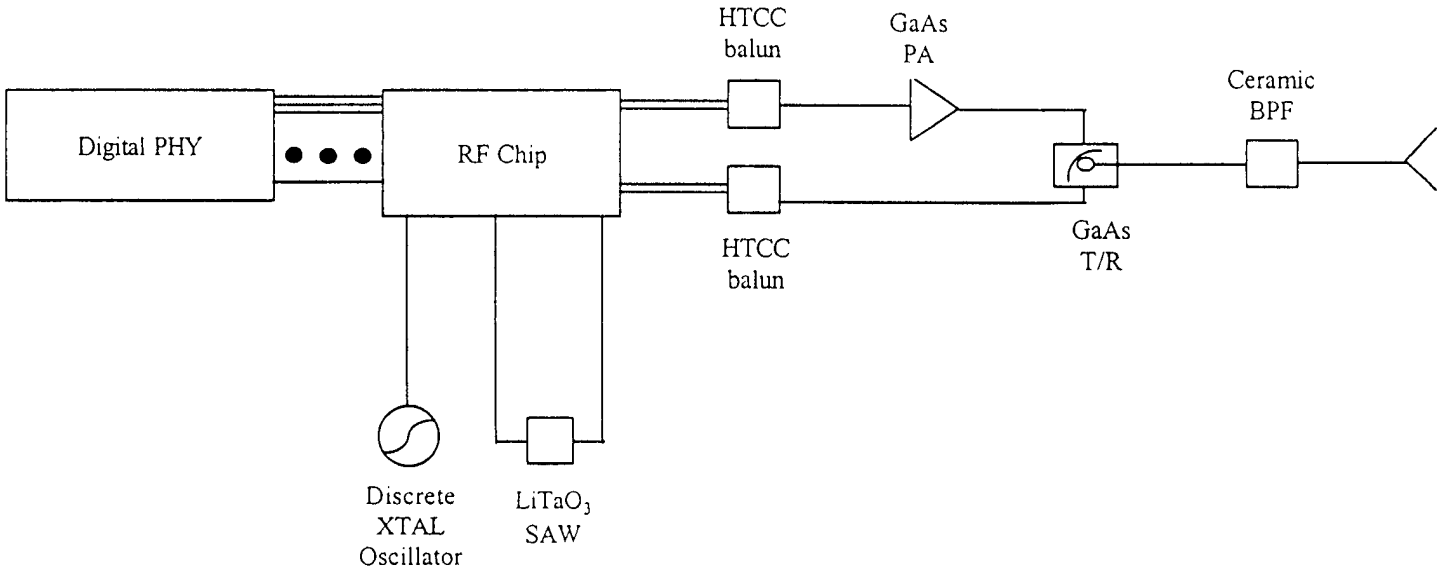

FIG. 1

(PRIOR ART)

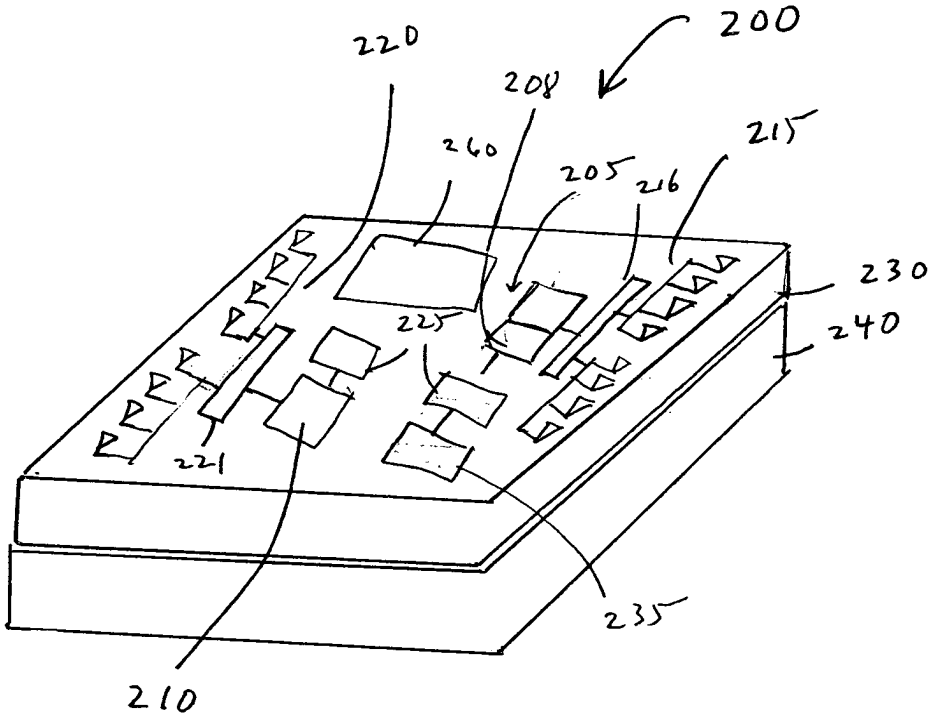

FIG. 2

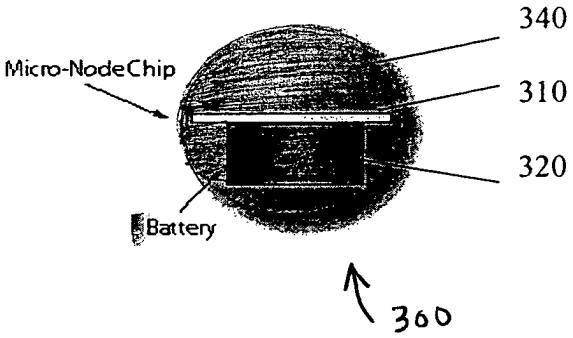

FIG. 3(a)

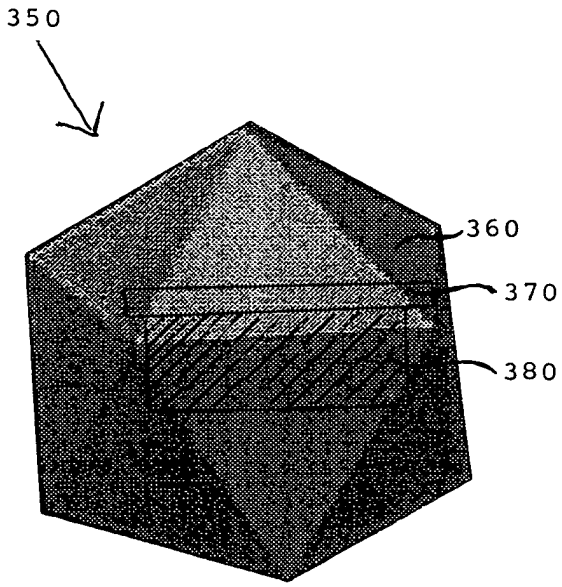

FIG. 3(b)

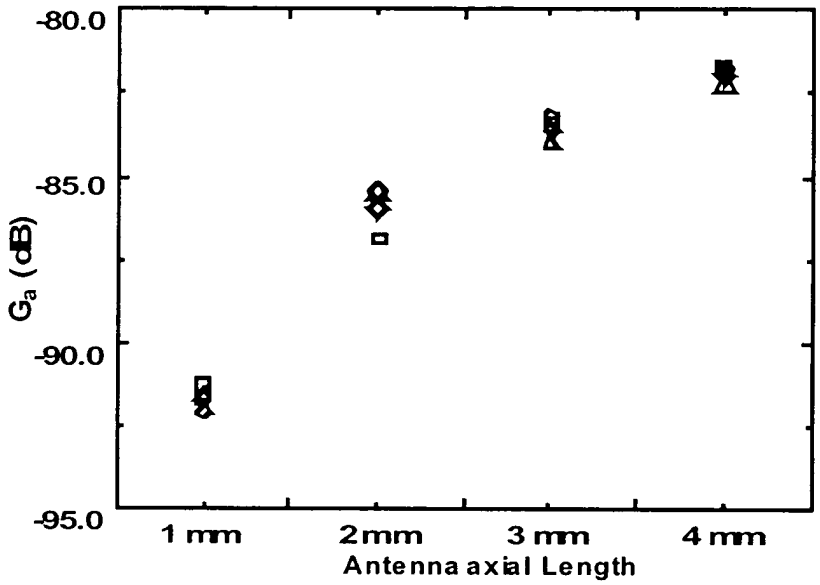

FIG. 4

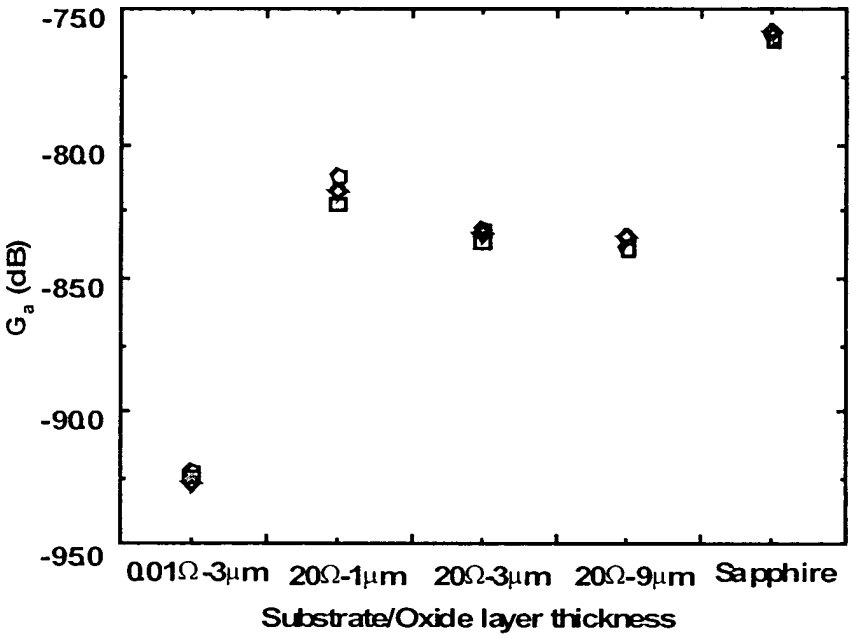
-750
-800
-850
-900
-950
G_a (dB)
0.01Ω-3μm
20Ω-1μm
20Ω-3μm
20Ω-9μm
Sapphire
Substrate/Oxide layer thickness

FIG. 5

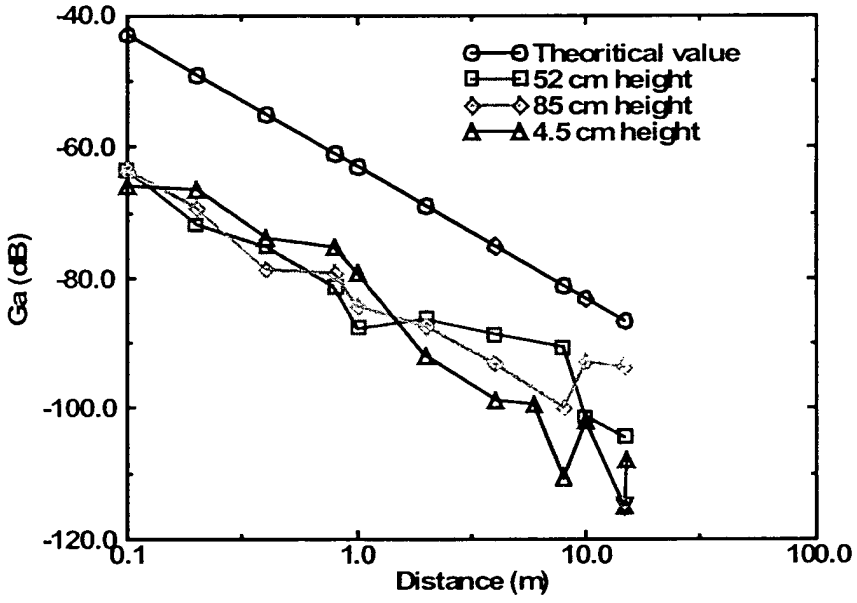
-40.0
-60.0
-80.0
-100.0
-120.0
Ga (dB)
0.1
1.0
10.0
100.0
Distance (m)
Theoritical value
52 cm height
85 cm height
4.5 cm height

FIG. 6

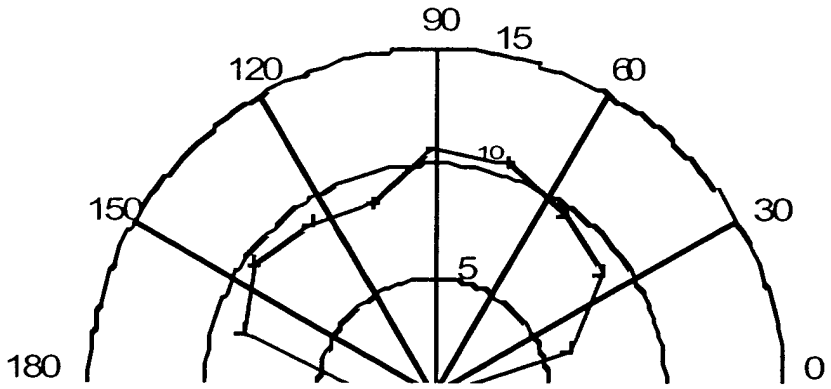

FIG. 7

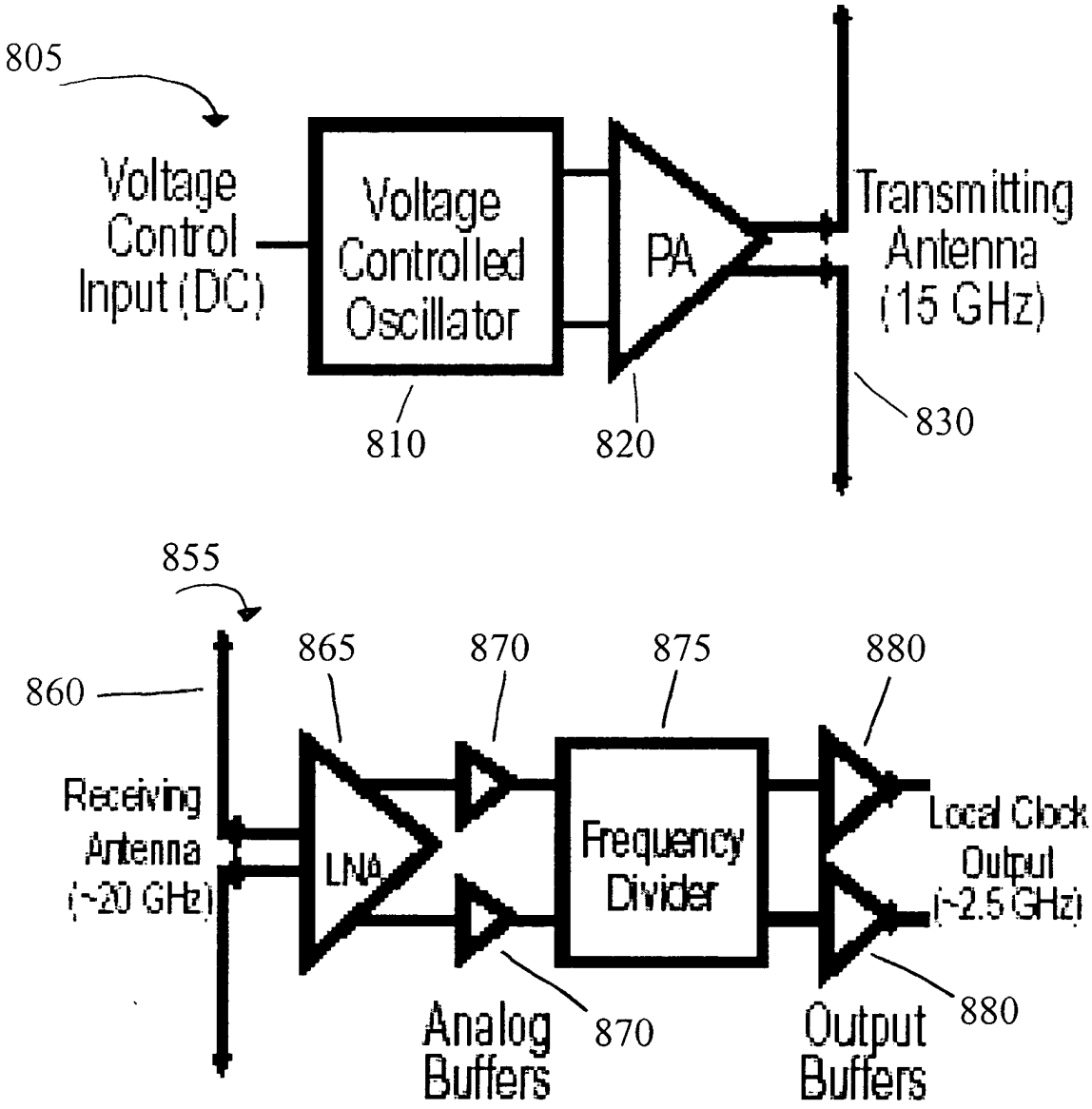
805
Voltage Control Input (DC)
Voltage Controlled Oscillator
PA
Transmitting Antenna (15 GHz)
810
820
830
855
860
865
870
875
880
Receiving Antenna (~20 GHz)
LNA
Frequency Divider
Local Clock Output (~2.5 GHz)
Analog Buffers
870
Output Buffers
880

FIG. 8

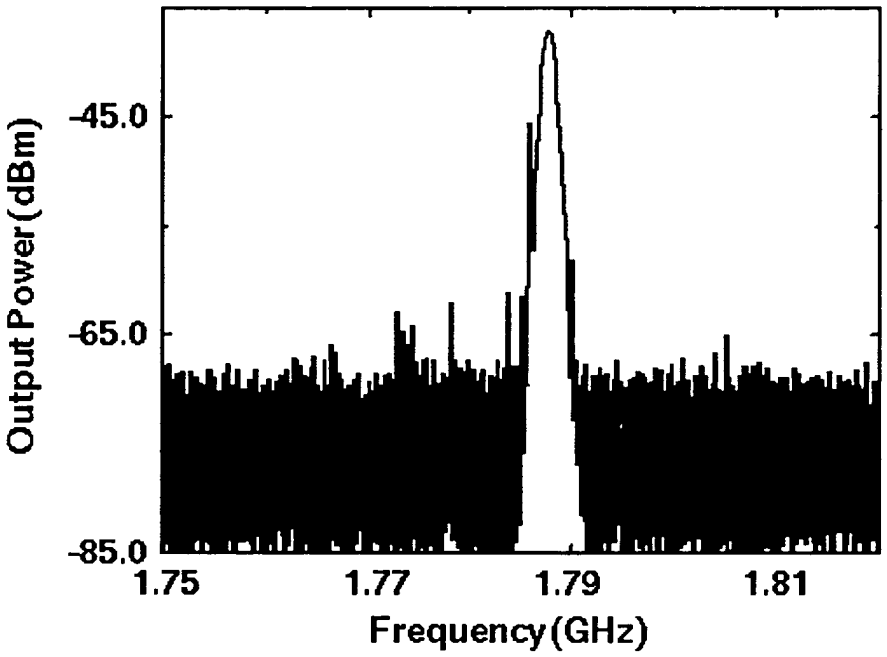

FIG. 9